

R E M A R K S

This Preliminary Amendment is responsive to the Office Action that was mailed June 2, 2005 (hereinafter "Office Action") and the Interview Summary that was mailed July 13, 2005 (hereinafter "Interview Summary").

Statement Of The Substance Of The Interview

Applicant extends his gratitude to the Examiner for the time and consideration that was extended to the Applicant during the telephone interview conducted on July 7, 2005.

The Interview Summary mailed July 13, 2005 appears to be complete and in compliance with M.P.E.P. §713.04 and 37 C.F.R. §1.133 and is incorporated herein by reference. Applicant believes that the portion of the Interview Summary that describes the substance of the interview is correct with the following addition. The Interview Summary states that, "the examiner indicated that Fig. 3A-3B provide adequate support for claim amendment reciting that reaction inlet piping 350 and reactor outlet piping 380 are centrally located." Applicant would add that the location of flow distribution manifold 360 was also discussed and that the Examiner indicated that there would be adequate support for a claim amendment reciting that flow distribution manifold 360 is centrally disposed where module 300 has a circular cross sectional configuration.

Amendments to the Specification

The Specification is amended to insert reference number "101" to refer to the assembly of stacked reactor modules. Failure to include this reference number in the Specification was an inadvertent error. This amendment does not introduce new matter because the referenced assembly is clearly illustrated in FIG. 2 and is described in detail in the Specification.

Amendments To The Claims

Claim 6 has been amended to recite that the autothermal reforming module further includes a cover fitted to a side of the inlet spiral passage and that the flow distribution manifold is disposed between the reactor and the cover. Support for this amendment can be found on page 11, lines 21-27 and in FIGs. 3A and 3B. No new matter is introduced by the amendment.

Claims 12-16 have been cancelled without prejudice.

New claims 17 and 18 are directed to a module for use in a fuel processor, and in particular, recites that the module includes a cover fitted to a side of the inlet spiral passage and that the flow distribution manifold is disposed between the reactor and the cover. Support for new claim 17 can be found on page 11, lines 21-27, in FIGs. 3A and 3B, and in original claims 2 and 4. Additional support with respect to new claim 18 can be found on page 12, lines 4-15, and in original claim 5. No new matter is introduced by either of new claim 17 or 18.

New claims 19 and 20 are directed to a module for use in a fuel processor, and in particular, recites that the module includes reactor inlet piping that provides fluid communication between the inlet spiral passage and the flow distribution manifold. Support for new claims 19 and 20 can be found on page 11, lines 24-31, on page 12, lines 1-15, and in FIGs. 3A and 3B. No new matter is introduced by either of claims 19 or 20.

New claims 21 - 23 are directed to a module for use in a fuel processor, and in particular, recites that the module has a circular cross sectional configuration and that the flow distribution manifold is centrally disposed for evenly distributing flow into the reactor. Support for new claims 21-23 can be found on page 9, lines 19-30, page 10, lines 1-2, page 11, lines 24-31, page 12, lines 1-15, and in FIGs. 3A and 3B. No new matter is introduced by any of new claims 21 -23.

Claim Rejections Under 35 U.S.C. §103(a)

Claims 6-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,326,537 ("Cleary") in view of U.S. Patent No. 4,438,691 ("McShea").

Claims 6-11 have been amended to recite among other features that the module includes a cover fitted to a side of the inlet spiral passage and that the flow distribution manifold is disposed between the reactor and the cover for evenly distributing flow into the reactor. The Interview Summary contains the statement that a proposed amendment containing such language would overcome the rejection of record. See Interview Summary, continuation sheet, page 3. Amended claims 6-11 are believed to be patentable over Cleary in view of McShea and in condition for allowance. Reconsideration and withdrawal of this rejection is respectfully requested.

New Claims

Claims 17 and 18 are directed to a module for use in a compact fuel processor and recite among other features that the module includes a cover fitted to a side of the inlet spiral passage and that the flow distribution manifold is disposed between the reactor and the cover for evenly distributing flow into the reactor. The references of record when taken separately or together do not teach or suggest a module that comprises an inlet spiral passage, a flow distribution manifold in fluid communication with the inlet spiral passage, a reactor and a cover fitted to a side of the inlet spiral passage such that the flow distribution manifold is disposed between the reactor and the cover for evenly distributing flow into the reactor. In the absence of such teachings, claims 17 and 18 are believed to be patentable over the references of record and in condition for allowance.

Claims 19 and 20 are directed to a module for use in a fuel processor and recite among other features that the module includes a reactor inlet piping in fluid communication with an inlet spiral passage and a flow distribution manifold. It is the position of the Office that Cleary discloses an inlet spiral passage and a flow distribution manifold. However, there is no teaching or suggestion in Cleary that the reactor should include reactor inlet piping for providing fluid communication between the inlet flow passage (36) and inlet plenum (13).

The references of record when taken separately or together do not teach or suggest a module that comprises an inlet spiral passage, a reactor inlet piping in fluid communication with the inlet spiral passage, and a flow distribution manifold in fluid communication with the reactor inlet piping. In the absence of such teachings, claims 19 and 20 are believed to be patentable over the references of record and in condition for allowance.

New claims 21-23 are directed to a module for use in a fuel processor and recite among other features that the module has a circular cross sectional configuration and that the flow distribution manifold is centrally disposed for evenly distributing a flow into the reactor. It is the position of the Office that Cleary discloses an inlet spiral passage and a flow distribution manifold. However, Applicant would point out that there is no teaching or suggestion in Cleary that the flow distribution manifold should be centrally disposed. To the contrary, Cleary teaches that the reactor module should have a central catalyst core (15) and that the inlet spiral should open into an inlet plenum (13). As illustrated and described in Cleary, inlet plenum 13 is disposed between the inlet flow passage (36) and the central catalyst core (15).

The references of record when taken separately or together do not teach or suggest a module that comprises an inlet spiral passage that is in fluid communication with a centrally disposed flow distribution manifold. Claims 21-23

are believed to be patentable over the references of record and in condition for allowance.

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All of the stated grounds of objection and rejection are believed to have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Frank C. Turner", is written over a horizontal line.

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